

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: SF/Ala Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-022402**Date Inspected:** 26-Mar-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG and Tower Components**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance Inspector (QA Inspector) George Goulet was present during the times noted above for observations relative to the work being performed.

Bay 10

This QA Inspector randomly observed the following work in progress in the Bay 10:

SMAW repair welding of weld joints 37TR2-009 located on PCMK OBG traveler rail. Welder was identified as 040582. QC was identified as ABF CWI Liu Cheng (QC1). Assisting QC1 at this location and appearing to be monitoring the welding operation and recording data was ZPMC QC Zhu Peng (QCA1), who was not a CWI. Weld variables recorded by QCA1 appeared to comply with WPS-345-SMAW-2G(2F)-repair as displayed on ZPMC Weld Repair Report B-WR20475 as presented to this QA Inspector and verbally identified by QCA1. Attached to ZPMC Weld Repair Report B-WR20475 was ZPMC Report of Ultrasonic Examination #20390 as displayed on ZPMC Weld Repair Report B-WR20475. ZPMC Report of Ultrasonic Examination #20390 was two pages long and showed approximately 30 Ultrasonic Testing (UT) indications for weld joint 37TR2-009. See the three photos below listing the numerous indications.

Bay 11

This QA Inspector randomly observed the following work in progress in the Bay 11:

SMAW welding of weld joints ESD1-TL6-2C/D-6, 7 located on PCMK east tower, lift 6. Welder was identified as 044541. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding

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operation and recording data was QCA1, who was not a CWI. Weld variables recorded by QCA1 appeared to comply with WPS-B-P-2313-TC-P4 as verbally identified by QCA1.

SMAW welding of weld joints WSD1-TL6-4C/D-21, 22 located on PCMK west tower, lift 6. Welder was identified as 040690. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding operation and recording data was QCA1, who was not a CWI. Weld variables recorded by QCA1 appeared to comply with WPS-B-P-2313-TC-P4 as verbally identified by QCA1.

SMAW welding of weld joint SSD1-TL6-1C/D-20 located on PCMK west tower, lift 6. Welder was identified as 052493. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding operation and recording data was QCA1, who was not a CWI. Weld variables recorded by QCA1 appeared to comply with WPS-B-P-2313-TC-P4 as verbally identified by QCA1.

SMAW welding of weld joints NSD1-TL6-3C/D-1, 2; SSD1-TL6-1C/D-21 located on PCMK west tower, lift 6. Welder was identified as 052930. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding operation and recording data was QCA1, who was not a CWI. Weld variables recorded by QCA1 appeared to comply with WPS-B-P-2313-TC-P4 as verbally identified by QCA1.

OBG Trial Assembly Area

This QA Inspector randomly observed the following work in progress in the OBG Trial Assembly Area:

FCAW welding of weld joints SEG3007AH-036, 038, 094, 096, 104 located on PCMK OBG 13AE. Welder was identified as 050242. QC was identified as ABF CWI Wu Ke Wen (QC2). Assisting QC2 at this location and appearing to be monitoring the welding operation and recording data was ZPMC QC Zhan Hai Feng (QCA2), who was not a CWI. Weld variables recorded by QCA2 appeared to comply with WPS-B-T-2231-ESAB as verbally identified by QCA2.

FCAW welding of weld joints SEG3007AH-106, 114, 116, 163, 165 located on PCMK OBG 13AE. Welder was identified as 055564. QC was identified as QC2. Assisting QC2 at this location and appearing to be monitoring the welding operation and recording data was QCA2, who was not a CWI. Weld variables recorded by QCA2 appeared to comply with WPS-B-T-2231-ESAB as verbally identified by QCA2.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

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Bay 10

37TR2-009

Near top of page 1 of ZPMC Report of Ultrasonic Examination #20390 listing the numerous UT indications for weld joint 37TR2-009

INDICATION NO. 指示号	PROBE ANGLE 探头角度	FROM FACE 检测面	LEG (次数)	Indication 指示	Reference 参考	Level 等级	Amplitude 幅度	Indication 指示	Rating
a	b	c	d						
30	2.2	-10	220						
30	9	-10	435						
135	7	-10	435						
120	6-12	-15	620						
70	12-13	-15	920						
130	13	-10	1150						
140	8	-10	1340						
50	12	-10	1600						
40	13	-8	1730						
50	4	-5	1860						
630	10-13	-5	2080						
785	10	0	2930						
220	10-16	0	3785						
80	10	-8	4785						
125	6	0	4940						
50	8	-10	5280						
75	11	0	5340						
25	5	-10	6055						
20	4	-10	6135						
40	4	0	6265						
60	7	-10	6605						
100	4	-10	6715						
90	13	0	6770						

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REPORT OF ULTRASONIC EXAMINATION

Page 2 of ZPMC Report of Ultrasonic Examination #20390 listing the numerous UT indications for weld joint 37TR2-009

REPORT NO. 报告编号	DATE	PAGE	Revision No. 修订号
37TR2-009	3/20		

WELD IDENTIFICATION 焊缝识别编号	INDICATION NO. 指示号	PROBE ANGLE 探头角度	FROM FACE 检测面	LEG (次数)	Indication 指示	Reference 参考	Level 等级	Amplitude 幅度	Indication 指示	Rating	Length 长度	Sound Path 声程	Depth from Face 'A' 距 A 表面深度	From 'X' 距 X	From 'Y' 距 Y	Discontinuity Evaluation 不连续估计	Remark 备注
a	b	c	d														
											135		120	-5	7120		
											300		10-13	-5	7650		
											50		4	-10	8220		20%
											60		7	-10	8570		20%
											160		23	0	9070		20%
											20		14	0	9115		
											4 10	30	70	8	0	9185	20%
											0 8	50	27	9	-12	9575	

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Bottom of page 1 of ZPMC Report of Ultrasonic Examination #20390 listing the numerous UT indications for weld joint 37TR2-009

INDICATION NO. 指示号	PROBE ANGLE 探头角度	FROM FACE 检测面	LEG (次数)	Indication 指示	Reference 参考	Level 等级	Amplitude 幅度	Indication 指示	Rating
a	b	c	d						
50	4	-5	1860						
630	10-13	-5	2080						
785	10	0	2930						
220	10-16	0	3785						
80	10	-8	4785						
125	6	0	4940						
50	8	-10	5280						
75	11	0	5340						
25	5	-10	6055						
20	4	-10	6135						
40	4	0	6265						
60	7	-10	6605						
100	4	-10	6715						
90	13	0	6770						

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Summary of Conversations:

As noted above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang, 150-0042-2372, who represents the Office of Structural Materials for your project.

Inspected By: Goulet, George

Quality Assurance Inspector

Reviewed By: Riley, Ken

QA Reviewer